2003-04 BUMP Report

Streams Monitoring Program
Lakes Monitoring Program
Oklahoma Water Watch Volunteer Monitoring Program

The Adobe® Reader is required to view and print these documents. You may obtain the reader software from Adobe's® Web Site.

Streams Monitoring Program

Permanent Stream Monitoring Station Results and Discussion

Lower Cimarron Sub-Basin (HUC 1105)
Cimarron River (Buffalo)
Cimarron River (Dover)
Cimarron River (Guthrie)
Cimarron River (Oilton)
Cimarron River (Orienta)
Cimarron River (Ripley)
Skeleton Creek (Lovell)

Upper Arkansas Sub-Basin (HUC 1106)
Arkansas River (Ralston)
Black Bear Creek (Pawnee)
Chickaskia River (Blackwell)
Salt Fork Of The Arkansas (Ingersoll)
Salt Fork Of The Arkansas River (Tonkawa)

Neosho/Grand Sub-Basin (HUC 1107)
Big Cabin Creek (Big Cabin)
Bird Creek (Catoosa)
Caney River (Ramona)
Elk River (Tiff City, Missouri)
Honey Creek (Grove)
Neosho River (Chouteau)
Neosho River (Commerce)
Neosho River (Connor Bridge)
Neosho River (Langley)
Spring Creek (Murphy)
Spring River (Quapaw)
Verdigris River (Inola)
Verdigris River (Keetonville)
Verdigris River (Lenapah)

Lower Arkansas Sub-Basir 1111)
Arkansas River (Bixby)
Arkansas River (Haskell)
Arkansas River (Moffett)
Arkansas River (Muskogee, U
Arkansas River (Sand Springs
Barren Fork (Eldon)
Caney Creek (Barber)
Flint Creek (Flint)
Fourche-Maline Creek (Red O
Illinois River (Tahlequah)
Illinois River (Watts)
Poteau River (Heavener)
Poteau River (Pocola)
Sager Creek (West Siloam Sp

North Fork of the Red Sub 1112)
Elk Creek (Hobart)
Elm Fork Of The Red (Mangui
North Fork Of The Red (Carte
North Fork Of The Red (Head
Salt Fork Of The Red River (E
Salt Fork Of The Red River (N

Upper Red Sub-Basin (HU(
East Cache Creek (Walters)
Mud Creek (Courtney)
Red River (Davidson)
Red River (Terral)

EXHIBIT F tabbies

Verdigris River (Wagoner)

Canadian Sub-Basin (HUC 1109)
Brushy Creek (Haileyville)
Canadian River (Bridgeport)
Canadian River (Calvin)
Canadian River (Konawa)
Canadian River (Purcell)
Canadian River (Taloga)
Canadian River (Whitefield)
Little River (Sasakwa)

Beaver/North Canadian Sub-Basin (HUC 1110)
Beaver River (Beaver)
Beaver River (Fort Supply)
Beaver River (Gate)
Beaver River (Guymon)
Beaver River (Turpin)
Deep Fork River (Beggs)
Deep Fork River (Stroud)
North Canadian River (Dustin)
North Canadian River (El Reno)
North Canadian River (Harrah)
North Canadian River (Seiling)
North Canadian River (Shawnee)
North Canadian River (Wetumka)
North Canadian River (Woodward)
Wolf Creek (Fort Supply)

Red River (Waurika)
Sandy Creek (Eldorado)
Washita River (Anadarko)
Washita River (Cordell)
Washita River (Durwood)
Washita River (Hammon)
Washita River (Pauls Valley)
West Cache Creek (Taylor)

Lower Red Sub-Basin (HU
Blue River (Durant)
Clear Boggy Creek (Caney)
Glover River (Glover)
Kiamichi River (Antlers
Kiamichi River (Big Cedar)
Kiamichi River (Tuskahoma)
Little River (Cloudy)
Little River (Holly Creek)
Mountain Fork River (Eagleto
Mountain Fork River (Smithvi
Muddy Boggy Creek (Atoka)
Muddy Boggy Creek (Unger)
Red River (Harris)
Red River (Hugo)

Lakes Monitoring Program

Executive Summary
Table of Contents
List of Figures
List of Plates
List of Tables
Introduction
Lakes Monitoring Program
Bibliography
Appendix A - Oklahoma's Beneficial Use Assessment Protocols
Index

Lake Monitoring Results and Discussion

- American Horse
- Arbuckle
- Arcadia
- Ardmore City
- Atoka
- Bellcow
- Birch
- Bixhoma
- Bluestem
- Boomer
- Broken Bow
- Brushy Creek
- Burtschi
- Canton
- Carl Albert
- Carl Blackwell
- Carter
- Cedar
- Healdton City
- Hefner
- Henryetta
- Heyburn
- Holdenville
- Hominy Municipal
- Hudson (Mayes County)
- Hudson (Osage County)
- Hugo
- Hulah
- Humphreys
- Jean Neustadt
- John Wells
- Kaw
- Keystone
- Konawa
- Raymond Gary
- R.C. Longmire
- Robert S. Kerr
- Rock Creek
- Rocky (Hobart)
- Sahoma
- Sardis
- Shawnee Twin # 1
- Shawnee Twin # 2
- Shell
- Skiatook
- Sooner
- Spavinaw
- Sportsman
- Stanley Draper
- Stilwell City
- Stroud Lake
- Talawanda # 1

- Chandler
- Chickasha
- Claremore
- Clear Creek
- Cleveland City
- Clinton
- Coalgate City
- Comanche
- Copan
- Crowder
- Cushing Municipal
- Dave Boyer (Walters)
- Dripping Springs
- Duncan
- El Reno
- Elk City
- Ellsworth
- Elmer Thomas
- Etling
- Eucha
- Eufaula
- Fairfax City
- Fort Cobb
- Fort Gibson
- Fort Supply
- Foss
- Frederick
- Fuqua
- Grand
- Great Salt Plains
- Greenleaf
- Guthrie
- Langston
- Lawtonka
- Liberty
- Lloyd Church (Wilburton)
- Lone Chimney
- Lugert-Altus
- Maysville (Wiley Post)
- McAlester
- McGee Creek
- McMurtry
- Meeker
- Murray
- Nanih Waiya
- New Spiro
- Okemah
- Okmulgee
- Oologah
- Overholser
- Ozzie Cobb
- Pauls Valley City
- Pawhuska
- Pawnee
- Perry
- Pine Creek
- Ponca
- Prague City
- Purcell
- Talawanda # 2
- Taylor
- Tecumseh
- Tenkiller Ferry
- Texoma
- Thunderbird
- Tom Steed
- Vanderwork
- Vincent
- W.R. Holway
- Waurika
- Waxhoma
- Wayne Wallace
- Webbers Falls
- Wes Watkins (North Deel
- Wetumka
- Wewoka
- Wister

Oklahoma Water Watch Volunteer Water Monitoring Program

Oklahoma Water Watch: History and Purpose
Parameters and Data Discussion
Environmental Awareness
Infrastructure Development
OWW Program Budget
Future of OWW
Conclusions

top | contact OWRB | water related links | disclaimer

Many documents available on this site are in Adobe® Acrobat (.PDF) format and require the free Adobe® Acrobat Rea to view and print.

Visit www.ok.gov, the Oklahoma State Portal

Page last updated: April 06, 2005

Barren Fork near Eldon

Station AT197000 (121700050010-001AT) is a permanent ambient trend monitoring station located on the Barren Fork River in Oklahoma. Situated in the east central portion of Cherokee County, the site was established west of the town of Eldon on State Highway 51. The station is positioned near the terminal end of stream segment 121700050010 and is classified within the Illinois River 8-digit HUC watershed (11110103). Water enters the stream system from Arkansas and from several tributaries including Green Creek (Westville Reservoir), England Hollow Creek, Scraper Hollow Creek, Peacheater Creek, Dennison Hollow Creek, and Tyner Creek, among others.

This station on the Barren Fork River has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from October 1999 through October of 2004. For purposes of reporting, this station is representative of the Barren Fork River from the confluence of Green Creek (94.6506, 35.9495) downstream to confluence of the Barren Fork River with the Illinois River (94.9142, 35.8510). As per Oklahoma Water Quality Standards, Appendix A, Table 1 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Public and Private Water Supply (PPWS), 2) Cool Water Aquatic Community—Fish and Wildlife Propagation (CWAC), 3) Agriculture—Class I Irrigation (AG), 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics. The Barren Fork is also designated as a Scenic River.

The PPWS beneficial use is supported. The CWAC beneficial use is supported. Dissolved oxygen (Figure 62a), pH (Figure 62b), turbidity (Figure 62c), and toxicant samples met the criteria prescribed in the CWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 62d and Figure 62e). The PBCR beneficial use is not supported (Table 26). Of the thirty (30) enterococci concentrations, eighteen (18) samples exceeded the prescribed screening level of 61 cfu/mL, and the geometric mean (71 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. The aesthetics beneficial use is impaired for total phosphorus (Figure 62f). Of the forty-nine (49) total phosphorus concentrations, sixteen (16) samples (or 33%) exceed the prescribed scenic river total phosphorus criterion of 0.037mg/L.

Flint Creek near Flint, OK

Station AT196000 (121700060010-001AT) is a permanent ambient trend monitoring station located on Flint Creek in Oklahoma. Situated in the southeastern portion of Delaware County, the site was established east of the town of Flint on US Highway 412. The station is positioned near the terminal end of stream segment 121700060010 and is classified within the Illinois River 8-digit HUC watershed (11110103). Water enters the stream system from Arkansas and from several tributaries including Sager Creek, among others.

This station on Flint Creek has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from October of 1999 through October of 2004. For purposes of reporting, this station is representative of Flint Creek from the confluence of an unlisted tributary (94.6318, 36.2169) downstream to a point above Flint Creek's intersection with US Highway 412 (94.7076, 36.1863). As per Oklahoma Water Quality Standards, Appendix A, Table 1 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Public and Private Water Supply (PPWS), 2) Cool Water Aquatic Community—Fish and Wildlife Propagation (CWAC), 3) Agriculture—Class I Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics. Flint Creek is also designated as a Scenic River.

The PPWS beneficial use is supported. The CWAC beneficial use is supported. Dissolved oxygen (Figure 64a), pH (Figure 64b), turbidity (Figure 64c), and toxicant samples met the criteria prescribed in the CWAC beneficial use. Fish collected during the summer of 2003 indicate that the segment is supporting a healthy biological community. Based on the Index of Biological Integrity (IBI) outlined in Appendix C of Oklahoma's Use Support Assessment Protocols (USAP), the station has a sample composition score of 24 (maximum 30) and fish condition score of 15 (maximum 15) for a total score of 39. This is above the assigned supporting threshold of 37 for Ozark Highland streams [OAC 46:15-5(j)]. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 64d and Figure 64e). Although 38% of the TDS concentrations are above the sample standards of 194.0 mg/L, the values are below the minimum value of 750mg/L. The PBCR beneficial use is not supported (Table 26). Of the twenty-nine (29) enterococci concentrations, eighteen (18) samples exceeded the prescribed screening level of 61 cfu/mL, and the geometric mean (134.9 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. The aesthetics beneficial use is impaired for total phosphorus (Figure 64f). Of the forty-eight (48) total phosphorus samples (c), 48 samples (or 100%) exceed the prescribed scenic river total phosphorus criterion of 0.037mg/L.

Illinois River near Watts

Station AT195500 (121700030350-001AT) is a permanent ambient trend monitoring station located on the Illinois River in Oklahoma. Situated in the northeastern portion of Adair County, the site was established north of the city of Watts on US Highway 59. The station is positioned near the upper end of stream segment 121700030350 and is classified within the Illinois River 8-digit HUC watershed (11110103). Water enters the stream system from Arkansas and several tributaries including Ballard Creek and Flint Creek, among others.

This station on the Illinois River has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from January of 1999 through September of 2003. For purposes of reporting, this station is representative of the Illinois River from its entrance into Oklahoma near Watts, Oklahoma (94.5551, 36.1189) downstream to confluence of Flint Creek with the Illinois River (94.7210, 36.1744). As per Oklahoma Water Quality Standards, Appendix A, Table 1 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Public and Private Water Supply (PPWS), 2) Cool Water Aquatic Community—Fish and Wildlife Propagation (CWAC), 3) Agriculture—Class I Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics. The Illinois River is also designated as a Scenic River.

The PPWS beneficial use is supported. The CWAC beneficial use is not supported. Of the thirty-two (32) turbidity samples (Figure 67c), fourteen (14) samples (or 44%) exceeded the numerical criterion of 10. Dissolved oxygen (Figure 67a), pH (Figure 67b), and toxicant samples met the criteria prescribed in the CWAC beneficial use. The AG beneficial use is supported for total dissolved solids (TDS), chlorides, and sulfates (Figure 67d and Figure 67e). Although 40% of the TDS concentrations exceeded the sample standard of 194 mg/L and the geometric mean (187.1 mg/L) exceeded the yearly mean standard of 156.0 mg/L, these values are below the prescribed minimum values of 750mg/L and 700 mg/L, respectively. The PBCR beneficial use is not supported (Table 26). Of the thirty (30) enterococci concentrations, twelve (12) samples exceeded the prescribed screening level of 61 cfu/mL, and the geometric mean (75.1 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. The aesthetics beneficial use is impaired for total phosphorus (Figure 67f). Of the forty-eight (48) total phosphorus samples (c), forty-seven (47) samples (or 98%) exceed the prescribed scenic river total phosphorus criterion of 0.037mg/L.